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ABSTRACT

A study determined the viability and effectiveness of the Computerized Competent Speaker Evaluation System. A total of 659 comments made by undergraduate students about the paper version of the Competent Speaker Speech Evaluation Form were subjected to two Q sorts. The 635 comments that emerged were incorporated into the evaluation system during its development. Subjects were taken from four recitation sections (each with 15 to 20 students) of an introductory public speaking course. Speeches made by the students in two control groups were evaluated with the traditional handwritten method using the printed version of the speech evaluation form. Speeches of students in the two experimental groups were evaluated with the computerized version of the form. Graduate teaching assistants evaluated the speeches. Results were invalid since raters scored speeches considerably differently. Results of a posttest questionnaire of students indicated that they perceived the system to be viable and efficacious. Analyses of a journal kept during the test period and of posttest interviews with the graduate teaching assistants using the system provided additional insights into the computerized evaluation system. Findings suggest that the system is viable, but the system's effectiveness is not yet established due to problems of low interrater reliability. (Contains 23 references and 5 tales of data. Evaluation forms, criteria for use of forms, sample screens from the computerized systems, a sample printout, and cost estimates for the computerized systems are attached. (RS)

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# Immediate Computerized Feedback in the Evaluation of Undergraduate Public Speaking: Development of the Computerized Competent Speaker Evaluation System and Testing of its Viability and Efficacy

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## Abstract

This study concerns the development and a quasi-experimental test of the Computerized Competent Speaker Evaluation System. The rationale for developing such a system is provided. Then the paper explains how a database of comments was collected, *Q*-sorted, and analyzed. Also, the construction of the computer software for the system is described. A quasi-experimental test of the system, examining its viability and efficacy as compared to traditional handwritten feedback, is described. The scores of students in a test group on speeches are compared with the scores of students in a control group using *t* tests. These results are shown to be invalid since the raters in both groups scored speeches considerably differently. The results of a posttest questionnaire of students involved in this study indicate that they perceived the system to be viable and efficacious. Analyses of a journal kept during the test period and of posttest interviews with the graduate teaching assistants using the system provided additional insights into the computerized evaluation system.

# Immediate Computerized Feedback in the Evaluation of Undergraduate Public Speaking: Development of the Computerized Competent Speaker Evaluation System and Testing of its Viability and Efficacy

It is safe to assert that the majority of teachers of public speaking desires to provide effective feedback to their students. In his classic question, Holtzman (1960) states it best: "The instructor of speech has one primary question to answer: What can I say (or write or do) that will result in this student's improving his communication ability?" (p. 1). Also, Book (1985), in an article analyzing effective feedback on speeches, asserts that experienced speech teachers have written a great deal about what comprises effective feedback.

The type of feedback referred to in the study reported in this paper is consistent with Clement and Frandsen's (1976) definition of "action-reaction," (pp.11-28) in other words, metacommunication: deliberate suggestions about a speech given subsequent to the speech. It is these deliberate comments

following the speech that Dedmon (1967) asserts should be given directly after the students speak or right before the class period ends. Dedmon cites Byers (1963), who suggests that students learn the best when they are given "immediate and valid knowledge" of their failure or success (p. 139). Although Byres (1963) is arguing for immediate oral feedback, a similar argument can be made for the value of immediate written feedback. However, effective immediate written feedback is more difficult to provide than delayed written feedback.

The desire to provide effective written feedback, that is also immediate, to public speaking students presents speech instructors with a dilemma. Often, when providing written feedback, speech instructors keep the evaluation sheets and give them to the students on some following day. Of course, the obvious problem with this option is that it diminishes the impact of feedback given to students (Leubitz & Hamilton, 1990). Another option is that the evaluator will provide handwritten comments at the end of the students' speeches, thus often supplying insufficient

feedback and frustrating both themselves and their students. Behnke and King (1984) point out that terse comments may be perceived as worthless by both students and instructor.

Therefore, the question this study seeks to answer is as follows: "How can instructors of public speaking provide effective immediate written feedback?"

It is an undisputed fact that microcomputers process data in a matter of minutes and often seconds (Fletcher, 1992). Buxton and Henry (1982) assert that the microcomputer is the most significant new tool man has designed in centuries.[1] They suggest that among its many desirable features is its capability to provide immediate feedback and that all of its features can be used to develop basic skills, listing communication as one of the basic skills. Because of these desirable features, educators have sought to incorporate the use of the computer into their respective academic disciplines in order to educate students more effectively. For instance, a program in a Chicago elementary school used computers to provide immediate feedback to students on their math problems.

That study demonstrated significant gains in the students' scores (Swarm, 1991).

So, since public speaking evaluators have struggled with wanting to provide adequate immediate feedback to their students and since microcomputers are very capable of providing immediate feedback, one would ask, "Can computers be used to provide effective immediate written feedback to public speaking students?" This study will examine the viability and efficacy of providing immediate computerized feedback to public speakers. Simply put, viability is operationalized as whether or not the computerized system is perceived to work. Efficacy refers to whether or not the computerized system enables students to improve in public speaking skills and/or grades earned for speeches.

## Method

This project examined two hypotheses. Hypothesis One stated the following: If based on an appropriate model of speech evaluation and a scientific developmental method, a viable computerized speech evaluation system can be developed. This hypothesis

was explored by an examination of the following: (a) the documented experience of two raters using the pilot Computerized Competent Speaker Evaluation System as they provided feedback throughout a test period, (b) specific items on a questionnaire given to students in a control and test group at the end of a test period, and (c) specific responses in an interview at the end of a test period of the two raters who used the Computerized Competent Speaker Evaluation System.

Hypothesis Two stated the following: That if used by evaluators who have undergone training on the Computerized Competent Speaker Evaluation System, the system may prove to be efficacious when subjected to a quasi-experimental test. This hypothesis was investigated by an examination of the following: (a) more significant improvement in the grades of students who received immediate computerized feedback in comparison to students who received traditional handwritten feedback and (b) the feedback of students in both groups on certain questions on the questionnaire given to them at the end of the test period.

Summarily, this project involved the formation of a database of speech evaluation comments for the Computerized Competent Speaker Evaluation System, the development of the computerized form, and the quasi-experimental testing of this form.

## Development of the Computerized Competent Speaker Evaluation System

Decision on prototype. Much consideration was given to which public speaking form should be used as the prototype of the computerized evaluation system. It was decided that this form should be as comprehensive as possible and based on current literature on competent public speaking. It also needed to have been tested and found valid, reliable, and free from biases. The form chosen for the prototype was "The Competent Speaker" Speech Evaluation Form (Morreale, Moore, Taylor, Surges-Tatum, & Hulbert-Johnson, 1994).

"The Competent Speaker" Speech Evaluation Form (Morreale et al., 1994) (see Appendixes A and B for form and criteria) assesses public speaking behavior, focusing on communication skills. Eight skills,

referred to as individual competencies, were determined as necessary in order for a student to exhibit competency in public speaking. An assessment of the students' preparation skills can be provided by examining the first four competencies. Also, an assessment of the students' delivery skills, both nonverbal and verbal behaviors, can be obtained by examining the last four competencies. Further, a holistic/aggregate assessment can be obtained by a total of the individual scores on these eight competencies. Degrees of assessment (unsatisfactory, satisfactory, or excellent) within each of the eight competencies are allowed for (Morreale et al, 1994).

For a 2-year period "The Competent Speaker" Speech Evaluation Form (Morreale et al., 1994) was tested for reliability, validity, and cultural biases. The traditional testing indicated that the speech evaluation form is reliable and valid (Morreale et al., 1994). The Rasch Analysis (Rasch, 1960) was used to analyze the speech evaluation form for cultural biases. It was found to be free from cultural biases (Tatum, 1991). Thus, as a result of the testing, the

evaluation form was found to be reliable, valid, and free from cultural biases.

Data collection. The paper version of "The Competent Speaker" Speech Evaluation Form was used in the sophomore level public speaking course (COMM 210) at the University of Colorado at Colorado Springs. For the fall of 1990 and the spring of 1991, as the graduate teaching assistants used "The Competent Speaker," their comments were stored in a database. In addition to these, approximately 200 comments were borrowed from a dissertation on public speaking (McMahan, 1988).

This resultant pool of comments was compared with the fragmented elements of the definitions of the eight competencies in "The Competent Speaker" Speech Evaluation Form (See appendixes A and B for form and criteria). If a minimum of three comments was not found for each fragmented element of each of the definitions, additional comments were deve oped from the criteria. Many irrelevant comments were discarded for redundancy or ambiguity. The final pool of

comments submitted to a first *Q* sort numbered 659 comments.

Data sorting. It was decided that through two *Q* sorts these 659 comments would be placed in the proper competencies and levels of these competencies. The *Q*-Sort technique was developed independently by Stephenson (1935) and Thomson (1935). The *Q*-Sort procedure calls for the participants to select sets of objects or comments relative to the concept being studied and to categorize these objects or comments. Brooks suggests that the purpose of a *Q* sort is to obtain a conceptual illustration of the sorters' perspectives on the concept being evaluated (1970).

According to Brooks (1970), the *Q* sets used in both sorts in this project were of the structured nature. They were established to represent the eight competencies of "The Competent Speaker" Speech Evaluation Form. The 659 comments were placed in random order for the start of the first *Q* sort. The evaluators were asked to sort these comments into competencies one through eight, with number nine representing a discard category. The result was that

635 comments of the original 659 comments were determined to have content validity in this first *Q* sort.

Then in a second *Q* sort, evaluators were asked to sort these 635 comments into levels of unsatisfactory, satisfactory, or excellent. Again, they were given a discard category. As a result of this *Q* sort 10 comments were discarded. Thus, 625 comments of the 635 comments were determined to have content validity in the second *Q* sort.

Statistical analysis of data. In both *Q* sorts, the interrater reliability of these four raters was determined with the Krippendorff *K* formula (Krippendorff, 1980). Further analysis, involving the identification of the modal score for each comment and the most deviant rater out of the four, shed light on which comments had to be rejected. Any comments that drew less than .50 agreement of the four raters were removed from the database. The number of comments remaining at the end of these two *Q* sorts was 625.

Construction of computer software program. While the database of comments was being constructed and

refined, available literature on the structural development of similar public speaking computerized feedback systems was evaluated. Based on interviews with Ralph Behnke (Zautke, 1991a) and Chris Sawyer (Zautke, 1991b), who had experimented with computerized speech feedback, the decision was made to use the software package, HyperCard$^{tm}$, on the Macintosh$^{tm}$ computer system (see Appendix E for sample costs). Doris Carey (Witter, 1992), of the School of Education University of Colorado at Colorado Springs, an expert on the use of computers in the classroom, was consulted about the system's conceptual layout in relation to Macintosh$^{tm}$ screens (see appendix C for sample screens). The 625 comments that emerged from the two Q sorts were incorporated into the Computerized Competent Speaker Evaluation System during its development.

Procedure Followed for The Quasi-Experimental Test of Computerized Competent Speaker Evaluation System

Project variables. The independent variable in this study is the type of feedback that the student speakers receive, that is, computerized or handwritten feedback. Dependent, quantitative variables are the

scores that students earned on their speeches and their attitudes toward the type of feedback they received, as reported on the posttest questionnaire. Qualitative outcome variables are the analysis of the results of posttest interviews with raters of the experimental group and analysis of the journal of observations kept during the training period.

Sample population. The sample was taken from the introductory public speaking class (COMM 210) at the University of Colorado at Colorado Springs during spring semester, 1993. Four recitation sections were used, each containing approximately 15-20 students. Thus, the total sample size was approximately 60-80 students. Two recitation sections were designated as a test group, and two sections were designated as a control group.

Training of evaluators. All four evaluators were trained in the use of "The Competent Speaker" Speech Evaluation Form. The two evaluators of the test group were trained additionally in the use of Computerized Competent Speaker Evaluation System. Successive weekly training was held as often as possible on "The

Competent Speaker" Speech Evaluation Form and on the Computerized Competent Speaker Evaluation System. After the four evaluators would critique a speech, they would compare their ratings on each of the eight competencies and their total scores, thus, endeavoring to normalize their grading tendencies.

Testing. The 15-20 students in both groups presented the four major required speeches of COMM 210 at assigned times during the semester of testing, spring, 1993. All students were videotaped as standard procedure in the COMM 210 course. The students in the control group were evaluated with the traditional handwritten method, using "The Competent Speaker" Speech Evaluation Form. On a day subsequent to their presentations, these students would examine the handwritten feedback and view the videotapes of their speeches in an oral communication laboratory.

The students in the experimental group were evaluated with the Computerized Competent Speaker Evaluation System. The graduate teaching assistants printed the evaluation forms after evaluating the students. Immediately following their presentations,

the students took their videotapes to an oral communication lab where the students picked up the computer printouts of the evaluations of their speeches, read them, and viewed their speeches (see appendix D for a sample printout).

Instrumentation. After the test period elapsed and all of the speeches had been evaluated, a questionnaire focusing primarily on viability and efficacy was given to the students in both the test group and the experimental group. This questionnaire had been developed to examine four underlying constructs that seemed relevant to providing feedback with the use of the computer in a public speaking classroom: (a) the time factor, (b) the personableness of the computerized system, (c) rater capability, and (d) impact on students' skills and grades. It was reasoned that the students' perceptions in these areas would reveal a lot about how viable and efficacious the computerized system was to the students. This questionnaire was examined for face validity (Carmines & Zeller, 1979).

A second evaluation that was made subsequent to the test period was separate interviews with the two graduate teaching assistants who used the Computerized Competent Speaker Evaluation System on the Macintosh$^{tm}$ computers. Just as the students' questionnaire had focused on viability and efficacy, so too this interview form was designed to focus on these aspects of competent speech evaluation. Since the interview form was patterned after the questionnaire and the questionnaire had been evaluated for face validity (Carmines & Zeller, 1979), it was assumed that the interview form would also have face validity.

Statistical analysis of data. The difference between the mean scores of students in the two sections comprising the experimental group on their last speech, as compared to the mean scores of the students in the two sections comprising the test group on their last speech in the control group was analyzed using *t* tests. It was thought that the improvement or lack of improvement in the scores earned on speeches given by the experimental group, when respectively compared with the scores earned on speeches given by the control

group, would indicate the efficacy of the computerized system.

Another series of *t* tests was run on the scores of the students' speeches, so that the grading tendencies of the evaluators could be investigated. The mean scores of each of the four raters were compared statistically so that the mean score of the students' speech scores awarded by each rater was compared with the mean score of the students' speech scores awarded by each of the other raters. Also, the tendencies of the two raters in the test group collectively, as compared to the tendencies of the two raters in the control group collectively, were examined statistically.

In addition to the *t* tests that were used to analyze the data collected from the students' speeches, a MANCOVA was used to analyze the data collected in the posttest questionnaire and to factor in a confounding variable. That confounding variable was the students' perceptions of their grades for the course as reflected in question 15 on the questionnaire. These tests were used to examine the difference in the amount of

perceived like or dislike for computerized or handwritten feedback (viability) and the students' perceptions as to which type of feedback most impacted ability and grades the between the control group and the test group (efficacy). Multiple analyses of variance were run so that the mean scores could be adjusted to account for the confounding variance caused by the students' perceptions of their grades for the course.

Thematic analysis of data. The data collected from observations made during the test period were recorded in a journal. These data were examined for subordinate themes, constructs that were significant to all four raters and the students involved in this experiment... Following this, the subordinate themes were synthesized into major themes or fundamental constructs.

A second qualitative informal thematic analysis of the data gleaned from the interviews of the two raters who used the Computerized Competent Speaker Evaluation System was used to examine the raters' perceptions of the viability and efficacy of system. The data that

were collected from the interviews were examined for subordinate themes, constructs that were important to the raters who used the system.

## Results

### Quantifiable Data

Interrater reliability in the first *Q* sort was .83. The total number of comments entering the first Q sort was 659, and the total number of comments remaining was 635. These 635 comments went into the second *Q* sort in which the interrater reliability was .60.

The differences between the means of the scores earned on the final speeches of the test group as compared to the means of the scores earned on the final speeches of the control group were examined with *t* tests. The difference of the mean score between both groups of students is 7.6 points, or .068 of the 112 possible points. The *t* value on the *final speech* was statistically significant ($p<.004$).

Insert Table 1 about here.

However, Table 2 suggests a confounding of this finding. It shows an analysis of the four evaluators in terms of their mean scores on each of the four speeches of the test period. Raters 1 and 2 are the test group raters. Raters 3 and 4 are the control group raters.

Insert Table 2 about here.

On the final speech, Rater 1, in the test group, rated an average of 14.5 points above Rater 4, in the control group. These 14 points equate to .125 of the 112 total points possible. Both of the raters in the test group individually rated more leniently than those in the control group. Also, the mean of the test group as compared to the mean of the control group, which was was statistically significant, shows that the raters in the test group collectively rated 7.6 points higher than the collective rating of the control group raters.

In order to examine the students' attitudes about the viability and efficacy of the Computerized Competent Speaker Evaluation System, a questionnaire was developed and administered. The investigation of the findings of this questionnaire are presented in Tables 3-5.

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Insert Table 3 about here.

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Item 1 shows a very significant statistical finding, and items 5, 8, 13, and 14 show statistically significant findings ($p<.05$ and $p<.001$). The students' responses to items 1 and 13 indicate that they felt that the time frame in which feedback was given to them impacted both their grades and abilities. Their responses to items 5, 8, and 14 indicate that (a) the use of the computer in the classroom did not bother them, (b) they felt neutral about the database, and (c) they felt that computerized feedback provides more objective and fairer feedback than handwritten feedback.

In order to look for constructs, a correlational statistic was run on the questionnaire data. Four clusters of items on the questionnaire exhibited significant statistical correlational validity and correlational face validity. To factor out how students' perceptions of their grades in the class affected their responses, a multivariate analysis was run on these four clusters. The item on the questionnaire that contained the confounding variable was item 15, which asked students what they perceived their grades would be in the public speaking course.

Table 4 shows the "Observed Means" and the "Adjusted Means" for the four clusters of items that correlated in the data from the posttest questionnaire of students involved in the experiment.

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Insert Table 4 about here.

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Only a few chose a grade other than "A" for the public speaking course in response to item 15 on the questionnaire. The adjusted means of the clusters above indicate that the students' responses to the

items comprising these clusters were only minimally affected by their perceived grades.

Table 5 shows that the only cluster of items from the questionnaire to manifest statistical significance is the cluster of items 1, 9, 12, and 13. Two of the items comprising this cluster probed the viability, and two items probed the efficacy of the computerized system. When these four items are combined, the resultant cluster is, "Rater/Feedback/Time Frame = Improvement" or "The time frame in which the rater provided feedback to me and the type of feedback provided to me caused my public speaking ability to improve and were pleasing to me." The *F* value for this cluster of items on the questionnaire indicates that the difference between the adjusted mean answer of the test group (4.63) and the adjusted mean of the control group (3.55) is significant ($p<.024$).

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Insert Table 5 about here.

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Qualitative Data

The journal of observations made during the test period seemed to synthesize into these five categories: (a) Not enough training and norming occurred, (b) the computerized system was not being used for a large portion of the speeches presented in the test group, (c) various complaints about the functioning of the system were voiced by the test group raters, (d) a primary concern was that the computerized system was taking too long to use, and (e) logistical and practical considerations were recorded in the journal.

Interviews were conducted at the end of the test period with the graduate teaching assistants who rated speeches in the test group. The results of these interviews clustered into the following groups: general comments about the experiment, the viability of the computerized system, and efficacy of the system. General comments about the computerized evaluation system include comments about the variety and understandibility of the comments and the benefit of immediate feedback. A number of other issues were addressed by the test raters. Both raters of the test

group answered affirmatively that they would use the Computerized Competent Speaker Evaluation System again.

Other questions in the interview examined the viability, or work-ability, of the computerized evaluation system. Although one test group rater did not like the impersonableness of the system, the other was not bothered by this. Both raters liked the database but said that it contained too many comments. Even though one rater said that his grading was not affected by the use of the system, the other rater said that her grading was fairer and more objective.

The efficacy, the impact on skills and grades, of the computerized evaluation system was also examined by the questionnaire. The two test group raters agreed that the immediate computerized feedback helped their students develop into better public speakers than if they had provided handwritten feedback. However, one restricted this by saying that the assistance was not significant. One rater said that his students did receive better grades because they received immediate computerized feedback.

## Discussion

This discussion is organized into three parts: First, the quantifiable data are discussed, including results of the two *Q* sorts, results of *t* tests run on students' grades on speeches given during the test period, results of *t* tests run to compare the scores awarded by the raters, and results of analyses of the student questionnaire. Second, the qualitative data are discussed, including observations made during the test period and responses given during posttest interviews with the two graduate teaching assistants rating the test group. Third, conclusions are drawn from these discussions about the viability and efficacy of the computerized evaluation system.

### Quantitative Data

The results of the first *Q* sort indicate that the raters rated reliably between themselves. They rated with .83 reliability. Krippendorf (1980), citing Brouwer, Clark, Gerbner, and Krippendorff (1969), writes that a reliability finding over .80 should be reported. The results of the second *Q* sort indicate that the raters sorted the comments with a .60 reliability. However, Krippendorf (1980) writes that

even tentative conclusions cannot be drawn from results below .63.

The large degree of interrater disagreement that Rater 4 had with the other three raters and the lack of interrater agreement in, especially, the second *Q* sort call attention to the need for training in "The Competent Speaker" Speech Evaluation Form. This training would need to emphasize the criteria of "The Competent Speaker" Speech Evaluation Form and relative semantic distinctions. The result of such training would be a more accurate database. If the present study is replicated, both *Q* sorts should be conducted again after this improved training of the raters would be conducted. If both are not conducted again, at least the second level *Q* sort should be repeated.

The comparison of means and *t* test scores revealed that those students in the test group out-performed the students in the control group (see Table 1). The *t* value for the *final speech* is statistically significant (.004). In other words, these results indicate that test-group students' grades on speeches did improve and, thus, their public speaking skills also improved.

These results seem to support the hypothesis of this study that suggests that a computerized evaluation system may prove to be efficacious for students when used by evaluators who have undergone training on that system.

These results, however, were confounded by the actual design of the experiment. Since the number of available speech recitation sections was limited, different graduate teaching assistants taught the test and the control sections. This confounding variable was examined with an analysis of the means scores on students' speeches as awarded by each rater on the *final speech* (see Table 2). These data call into question the data presented in Table 1. Thus, the efficacy of the computerized system was not fully demonstrated in this project. Therefore, since the test group raters scored significantly higher than the control group raters on the final speech, the findings in Table 1, which suggest that the computerized system may have aided students in the test group to score higher, are shown to be invalid.

Although no quantitative measures were run and no records have been kept that would show multiple semester means for these raters prior to the test period, Rater 1 consistently exhibited a tendency to award higher scores for the speeches of students in her sections as compared to how other graduate teaching assistants rated their students' speeches. On the other hand, Rater 4 exhibited tendencies in the opposite direction. Such rater error was evident in the discussions during the norming sessions. Also, the raters in the control group may have been trying to compensate for the relatively slow printing of the computerized evaluation system or their lack of proficiency with the system.

On the *t* tests (see Table 3) that were run on individual items on the posttest questionnaire, five individual items on the questionnaire showed statistical significance (1, 5, 8, 13, and 14). The test group students' responses to items 1 and 13 indicate that they felt that the computerized system was efficacious. On items 5, 8, and 14 they indicated

that they perceived the computerized feedback system as viable.

Since the differences between the observed mean and the adjusted mean (see Table 4) for both groups in this study were only minimally affected by the students' perceived grades for the course, one can assume that their responses on the questionnaire accurately reflected their perceptions.

Of the four clusters of items from the questionnaire that formed after the correlational statistic was run, one cluster manifested a statistical significant difference (see Table 5). Since students in the test group perceived the rater, method of feedback, and time frame in which feedback was provided to them as all correlating to contribute to improvement in their public speaking skills, the viability and efficacy of the computerized evaluation system are both supported.

Qualitative Data

The data from the journal observations indicate that more training on the Computerized Competent Speaker Evaluation System and more norming among the

raters are needed than was accomplished in this project. A more thorough knowledge of the criteria contained in "The Competent Speaker" Speech Evaluation Form is needed. Additionally, journal observations documented that only the *final speech* could be examined for statistical significance. The number of times that the computerized system was used to rate speeches in the test group on the first three speeches was insufficient for test purposes. Another issue suggested that too much time was being consumed as raters concluded their comments and as the system printed the evaluations. It was noted that a faster printer was needed.

The answers to the general questions in the posttest interviews support journal observations that the system needs to be quicker and the raters needed more training. It is important that the raters commented that they liked the ability to make particular comments to students. Also, the raters provided suggestions for various changes in the system, itself. The journal observations and interview suggestions about increasing the speed of the system

and about additional training need to be researched in another study.

The answers to the questions devoted to the viability of the computerized system also suggest that additional training may be needed to eliminate the feeling of impersonableness created by the system. The raters' responses to an item dealing with the potential increased objectivity and fairness are split. In general, the responses of the graduate teaching assistants about the viability of the computerized evaluation system suggest that they are ambivalent about it. However, both raters did say that they would use the computerized system again.

The test raters' responses to the questions in the interviews that probed the efficacy of the computerized evaluation system indicate they both felt that their students' abilities improved because the students received immediate feedback. Furthermore, one said that his students earned better grades because of immediate feedback. In general, the responses of the graduate teaching assistants indicate they felt that the system is efficacious.

Conclusion

The results of this study, which endeavored to answer the question about how instructors of public speaking can provide effective immediate written feedback to their students after their speeches, indicate the following:

1. The first hypothesis, which asks if a viable computerized system can be developed, seems to have been supported. The journal observations indicate that, although the system had difficulties, it is viable. The students' responses on the posttest questionnaire reveal that they perceived it as viable. Also, the responses given in the posttest interview show that the test group raters perceived the system as viable.

2. The second hypothesis, which asks if the system will prove to be efficacious, was not fully supported. The students' grades on speeches do not indicate that the system aided in better grades and increased skill. However, the students' responses on the posttest questionnaire reveal that the test group students perceived that their grades and skills

improved because they were given immediate computerized feedback.

The use of the Computerized Competent Speaker Evaluation System is, therefore, determined to be a promising instructional strategy for improving public speaking instruction.

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# Appendix A

## Copy of "The Competent Speaker" Speech Evaluation Form

**THE COMPETENT SPEAKER**
**SPEECH PERFORMANCE EVALUATION FORM**

**SPEAKER'S NAME:**_____ **ASSIGNMENT:**_____
**EVALUATOR'S NAME:**_____ **DATE:**__/__/__

| EIGHT PUBLIC SPEAKING COMPETENCIES | System for Scoring: | SPEAKING PERFORMANCE RATINGS: Unsatisfactory | Satisfactory | Excellent |
|---|---|---|---|---|
| Competency One<br>CHOOSES AND NARROWS A TOPIC APPROPRIATELY FOR THE AUDIENCE AND OCCASION<br>Comments: | | | | |
| Competency Two<br>COMMUNICATES THE THESIS/SPECIFIC PURPOSE IN A MANNER APPROPRIATE FOR AUDIENCE AND OCCASION<br>Comments: | | | | |
| Competency Three<br>PROVIDES APPROPRIATE SUPPORTING MATERIAL BASED ON THE AUDIENCE AND OCCASION<br>Comments | | | | |
| Competency Four<br>USES AN ORGANIZATIONAL PATTERN APPROPRIATE TO TOPIC, AUDIENCE, OCCASION, & PURPOSE<br>Comments | | | | |
| Competency Five<br>USES LANGUAGE THAT IS APPROPRIATE TO THE AUDIENCE AND OCCASION<br>Comments: | | | | |
| Competency Six<br>USES VOCAL VARIETY IN RATE, PITCH, & INTENSITY, TO HEIGHTEN AND MAINTAIN INTEREST<br>Comments: | | | | |
| Competency Seven<br>USES PRONUNCIATION, GRAMMAR, & ARTICULATION APPROPRIATE TO THE DESIGNATED AUDIENCE<br>Comments: | | | | |
| Competency Eight<br>USES PHYSICAL BEHAVIORS THAT SUPPORT THE VERBAL MESSAGE<br>Comments: | | | | |

General Comments: Summative Score of Competencies: _____

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APPENDIX B

Criteria for Use of *"The Competent Speaker" Speech Evaluation Form*

"The Competent Speaker" Speech Evaluation Form

Eight Public Speaking Competencies and Criteria for Assessment

Competency One
*CHOOSES AND NARROWS A TOPIC APPROPRIATE TO THE AUDIENCE AND OCCASION.*

EXCELLENT = *The speaker presents a topic and a focus that are exceptionally appropriate for the purpose, time constraints, and audience.*
[That is, the speaker's choice of topic is clearly consistent with the purpose, is totally amenable to the time limitations of the speech, and reflects unusually insightful audience analysis.]

SATISFACTORY = *The speaker presents a topic and a focus that are appropriate for the purpose, time constraints, and audience.*
[That is, the speaker's choice of topic is generally consistent with the purpose, is a reasonable choice for the time limitations of the speech, and reflects appropriate analysis of a majority of the audience.]

UNSATISFACTORY = *The speaker presents a topic and a focus that are not appropriate for either the purpose, time constraints, or audience.*
[That is, the speaker's choice of topic is inconsistent with the purpose, the topic cannot be adequately treated in the time limitations of the speech, and there is little or no evidence of successful audience analysis.]

(Appendix B continues)

(Appendix B continued)

Competency Two
*COMMUNICATES THE THESIS/SPECIFIC PURPOSE IN A MANNER APPROPRIATE FOR THE AUDIENCE AND OCCASION.*

EXCELLENT = *The speaker communicates a thesis/specific purpose that is exceptionally clear and identifiable.*
[That is, there is no question that all of the audience members should understand clearly, within the opening few sentences of the speech, precisely what the specific purpose/thesis of the speech is.]

SATISFACTORY = *The speaker communicates a thesis/specific purpose that is adequately clear and identifiable.*
[That is, at least a majority of the audience should understand clearly, within the opening few sentences of the speech, precisely what the specific purpose/thesis of the speech is.]

UNSATISFACTORY = *The speaker does not communicate a clear and identifiable thesis/specific purpose.*
[That is, a majority of the audience may have difficulty understanding, within the opening few sentences of the speech, precisely what the specific purpose/thesis of the speech is.]

(Appendix B continues)

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(Appendix B continued)

Competency Three
PROVIDES SUPPORTING MATERIAL APPROPRIATE TO THE AUDIENCE AND OCCASION.

EXCELLENT = The speaker uses supporting material that is exceptional in quality and variety.
[That is, supporting material is unarguably linked to the thesis of the speech, and further is of such quality that it decidedly enhances the credibility of the speaker and the clarity of the topic.]

SATISFACTORY = The speaker uses supporting material that is appropriate in quality and variety.
[That is, supporting material is logically linked to the thesis of the speech, and is of such quality that it adds a measurable level of interest to the speech.]

UNSATISFACTORY = The speaker uses supporting material that is inappropriate in quality and variety.
[That is, supporting material is only vaguely related to the thesis of the speech, and variety is either too great or too little to do anything but detract from the effectiveness of the speech.]

(Appendix B continues)

(Appendix B continued)

Competency Four
*USES AN ORGANIZATIONAL PATTERN APPROPRIATE TO THE TOPIC, AUDIENCE, OCCASION, AND PURPOSE.*

EXCELLENT = *The speaker uses an exceptional introduction and conclusion and provides an exceptionally clear and logical progression within and between ideas.*

[That is, the introduction clearly engages the audience in an appropriate and creative manner, the body of the speech reflects superior clarity in organization, and the conclusion clearly reflects the content of the speech and leaves the audience with an undeniable message or call to action.]

SATISFACTORY = *The speaker uses an appropriate introduction and conclusion and provides a reasonably clear and logical progression within and between ideas.*

[That is, the introduction clearly engages a majority of the audience in an appropriate manner, the body of the speech reflects adequate clarity in organization, and the conclusion reflects adequately the content of the speech and leaves a majority of the audience with a clear message or call to action.]

UNSATISFACTORY = *The speaker fails to use an introduction or conclusion and fails to provide a reasonably clear and logical progression within and between ideas.*

[That is, the introduction fails to engage even a majority of the audience in an appropriate manner, the body of the speech reflects lack of clarity in organization, and the conclusion fails to reflect adequately the content of the speech and fails to leave even a majority of the audience with a clear message or call to action.]

(Appendix B continues)

(Appendix B continued)

Competency Five
*USES LANGUAGE APPROPRIATE TO THE AUDIENCE AND OCCASION.*

EXCELLENT = *The speaker uses language that is exceptionally clear, vivid, and appropriate.*
[That is, the speaker chooses language that enhances the audience's comprehension and enthusiasm for the speech, while adding a measure of creativity that displays exceptional sensitivity by the speaker for the nuances and poetry of meaning.]

SATISFACTORY = *The speaker uses language that is reasonably clear, vivid, and appropriate.*
[That is, the speaker chooses language that is free of inappropriate jargon, is nonsexist, is non racist, etc.]

UNSATISFACTORY = *The speaker uses unclear or inappropriate language.*
[That is, the speaker chooses inappropriate jargon or language which is sexist, racist, etc.]

(Appendix B continues)

(Appendix B continued)

Competency Six

*USES VOCAL VARIETY IN RATE, PITCH, AND INTENSITY (VOLUME) TO HEIGHTEN AND MAINTAIN INTEREST APPROPRIATE TO THE AUDIENCE AND OCCASION.*

EXCELLENT = *The speaker makes exceptional use of vocal variety in a conversational mode.*

[That is, vocalics are exceptionally and appropriately well-paced, easily heard by all audience members, and varied in pitch to enhance the message.]

SATISFACTORY = *The speaker makes acceptable use of vocal variety in a conversational mode.*

[That is, the speaker shows only occasional weakness in pace, volume, pitch, etc., thereby not detracting significantly from the overall quality or impact of the speech.]

UNSATISFACTORY = *The speaker fails to use vocal variety and fails to speak in a conversational mode.*

[That is, the speaker shows frequent weakness in controlling and adapting pace, volume, pitch, etc., resulting in an overall detraction from the quality or impact of the speech.]

(Appendix B continues)

(Appendix B continued)

Competency Seven
*USES PRONUNCIATION, GRAMMAR, AND ARTICULATION APPROPRIATE TO THE AUDIENCE AND OCCASION.*

EXCELLENT = *The speaker has exceptional articulation, pronunciation, and grammar.*
[That is, the speaker exhibits exceptional fluency, properly formed sounds which enhance the message, and no pronunciation or grammatical errors.]

SATISFACTORY = *The speaker has acceptable articulation, with few pronunciation or grammatical errors.*
[That is, most sounds are properly formed, there are only minor vocalized disfluencies, and a few (1Ã2) minor errors in pronunciation and grammar.]

UNSATISFACTORY = *The speaker fails to use acceptable articulation, pronunciation, and grammar.*
[That is, nonfluencies and disfluencies interfere with the message, and frequent errors in pronunciation and grammar make it difficult for the audience to understand the message.]

(Appendix B continues)

(Appendix B continued)

Competency Eight
*USES PHYSICAL BEHAVIORS THAT SUPPORT THE VERBAL MESSAGE.*

EXCELLENT = *The speaker demonstrates exceptional posture, gestures, bodily movement, facial expressions, eye contact and use of dress.*
[That is, kinesic (posture, gesture, facial expressions, eye contact) and proxemic (interpersonal distance and spatial arrangement) behaviors and dress consistently support the verbal message and thereby enhance the speaker's credibility throughout the audience.]

SATISFACTORY = *The speaker demonstrates acceptable posture, gestures, facial expressions, eye contact and use of dress.*
[That is, kinesic (posture, gesture, facial expressions, eye contact) and proxemic (interpersonal distance and spatial arrangement) behaviors and dress generally support the message, with minor inconsistencies that neither significantly distract from the speaker's credibility with the audience nor interfere with the message.]

UNSATISFACTORY = *The speaker fails to use acceptable posture, gestures, facial expressions, eye contact and dress.*
[That is kinesic (posture, gesture, facial expressions, eye contact) and proxemic (interpersonal distance and spatial arrangement) behaviors and dress are incongruent with the verbal intent and detract from the speaker's credibility with the audience as well as distracting the audience from the speaker's message.]

10/91

Appendix C

Copies of Sample Screens from the

Computerized Competent Speaker Evaluation System

**"THE COMPETENT SPEAKER"**
**COMPUTERIZED EVALUATION FORM**

**Version Option:**

○ **Short Version (fewer comments)** ○ **Long Version (many comments)**

**Scoring Option:**

○ **Normative Driven Scoring** ○ **Criteria Driven Scoring**

**Directions:** Move the mouse and place the index finger of the hand symbol inside the circle next to the name of 1) the length of the form desired and click the mouse once, 2) then do the same for the scoring option desired.

(Appendix C continues)

(Appendix C continued)

## THE COMPETENT SPEAKER SPEECH PERFORMANCE EVALUATION

SPEAKER'S NAME _____ ASSIGNMENT _____

SPEAKER'S SID _____ DATE Wed. Oct 5, 1994

EVALUATOR'S NAME _____ TIME _____

**EIGHT PUBLIC SPEAKING COMPETENCIES**

| | PERFORMANCE RATING | | |
|---|---|---|---|
| | *UNSAT* | *SAT* | *EXCELL* |
| **COMPETENCY ONE:** Topic Chosen and Narrowed app. for Audience & Occasion | | | |
| COMMENTS: 0 | 0 | 0 | 0 |
| **COMPETENCY TWO:** Thesis/Specific Purpose app. for Audience & Occasion | | | |
| COMMENTS: 0 | 0 | 0 | 0 |
| **COMPETENCY THREE:** Supporting Material app. for Audience & Occasion | | | |
| COMMENTS: 0 | 0 | 0 | 0 |
| **COMPETENCY FOUR:** Organization app. for Topic, Audience, Occ. & Purpose | | | |
| COMMENTS: 0 | 0 | 0 | 0 |
| **COMPETENCY FIVE:** Language appropriate for Audience & Occasion | | | |
| COMMENTS: 0 | 0 | 0 | 0 |
| **COMPETENCY SIX:** Variety in Rate, Pitch, and Intensity app. for Aud. & Occ. | | | |
| COMMENTS: 0 | 0 | 0 | 0 |
| **COMPETENCY SEVEN:** Pronunciation, Grammar, and Art. app. for Aud. & Occ. | | | |
| COMMENTS: 0 | 0 | 0 | 0 |
| **COMPETENCY EIGHT:** Physical Behaviors that Support the Verbal Message | | | |
| COMMENTS: 0 | 0 | 0 | 0 |

*GENERAL COMMENTS:*

**TOTAL SCORE OF COMPETENCIES 0**

Start/Stop Time | Save | Print | New Sheet | Quit

(Appendix C continues)

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(Appendix C continued)

| COMPETENCY ONE: CHOOSES AND NARROWS A TOPIC APPROPRIATE TO THE AUDIENCE AND OCCASION. | | |
|---|---|---|
| **UNSATISFACTORY = The speaker presents a topic and a focus that are not appropriate for either the purpose, time constraints, or audience.** | **SATISFACTORY = The speaker presents a topic and a focus that are appropriate for the purpose, time constraints, and audience.** | **EXCELLENT = The speaker presents a topic and a focus that are exceptionally appropriate for the purpose, time constraints, and audience.** |
| **Topic**<br>Fasinating topic, but not sure how it relates to topic requirements<br>Valuable topic, but this topic needed to be off the topic list<br><br>**Focus**<br>Too much material<br>Topic needs more focus<br>I'm glad you get involved in | **Topic**<br>That's an interesting topic. Thank you for sharing it.<br>Topic is mundane<br>Thought provoking topic<br>Significant topic<br>Good topic for persuasion<br>A challenging topic<br>Interesting topic<br><br>**Focus**<br>Good narrowing of topic<br>Thoughtful topic need a tighter focus | **Topic**<br>You have a good understanding of issues that relate to your fellow man<br>Creative approach to topic<br>You bring up worthwhile topics and discuss them intelligently<br>Fascinating topic<br>Timely topic selection<br>Great topic selection<br>That was a difficult topic, and you covered all the major points well<br>Excellent orginal development of your topic<br>Difficult but important topic handled discreetly<br>Excellent topic selection<br><br>**Focus**<br>Topic well selected and narrowed<br>Novel approach to a familiar |

(Appendix C continues)



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(Appendix C continued)

| COMPETENCY TWO: COMMUNICATES THE THESIS/SPECIFIC PURPOSE IN A MANNER APPROPRIATE FOR THE AUDIENCE AND OCCASION. | | |
|---|---|---|
| **UNSATISFACTORY** = The speaker does not communicate a clear and identifiable thesis/specific purpose. | **SATISFACTORY** = The speaker communicates a thesis/specific purpose that is adequately clear and identifiable. | **EXCELLENT** = The speaker communicates a thesis/specific purpose that is exceptionally clear and identifiable. |
| **Thesis**<br>Good introduction-not sure which focus point was thesis<br>I don't understand what point you're trying to get across<br>Although the thesis is included on your outline, it wasn't specifically included in presentation.<br>I wasn't clear on your thesis<br>Need to state thesis early and with emphasis<br><br>**Specific Purpose**<br>Establish purpose earlier in presentation<br>Your exact purpose is unclear<br>The perceived purpose of speech not consistent with topic<br>Purpose was confusing<br>Purpose was different than assignment | **Thesis**<br>Good thesis<br>Emphasize thesis statement<br><br>**Specific Purpose**<br>Interesting approach to topic<br>Interesting purpose<br>Speech purpose was accomplished.<br>Purpose of your speech is consistent with topic | **Thesis**<br>Clear statement of thesis<br>Concise thesis statement<br>Speech purpose was clear and specific.<br>Very clear thesis<br>Your thesis was presented exceptionally clearly<br>Very clear thesis statement<br><br>**Specific Purpose**<br>The purpose of your speech is very appropriate for audience<br>Your purpose was extraordinarily appropriate for audience<br>Your purpose was conveyed extremely well |

(Appendix C continues)



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(Appendix C continued)

| COMPETENCY THREE: PROVIDES SUPPORTING MATERIAL APPROPRIATE TO THE AUDIENCE AND OCCASION. | | |
|---|---|---|
| **UNSATISFACTORY = The speaker uses supporting material that is inappropriate in quality and variety.** | **SATISFACTORY = The speaker uses supporting material that is appropriate in quality and variety.** | **EXCELLENT = The speaker uses supporting material that is exceptional in quality and variety** |
| **Supporting Material**<br>Most information in the presentation is common knowledge<br>Need to define complex terms.<br>Avoid passing pictures and objects around your audience while speaking.<br>Use more authoritative and current evidence.<br>Need to go beyond personal opinion-find expert support<br>Remember the 30/70 rule<br>Specific examples would have helped greatly to tighten focus<br>Supporting material a bit disjointed<br>Speech aids would have helped<br>Too many examples-choose "best of the best"<br>Sources need to be cited<br>Cite more examples to support the assertions | **Supporting Material**<br>Concrete examples of personal examples<br>Good selection of supporting material<br>Make visual aids larger.<br>Facts and figures could have been more meaningfully displayed in a chart.<br>Good information; you really know your material.<br>Good comparison of different graphs<br>Good use of narration<br>Cite the source of your statistics<br>Effective handouts<br>Good explanations of complex material<br>Informative operational definition<br>Need more specific examples<br>Good variety of evidence used to support the thesis statement<br>Good use of credible sources | **Supporting Material**<br>Clever use of cartoones<br>Thought-provoking information.<br>Visual aid was well constructed.<br>Slides were very helpful<br>Speech aid simple and effective-documentation done well<br>You have obviously researched your topic well<br>Fascinating information<br>Excellent examples and research<br>Purpose exceptionally supported and extended your topic<br>Strong supporting material<br>Dramatic use of data<br>Excellent support and variety of support<br>Outstanding visual aids<br>Excellent supporting material |

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(Appendix C continues)

(Appendix C continued)

| COMPTENCY FOUR: USES AN ORGANIZATIONAL PATTERN APPROPRIATE TO THE TOPIC, AUDIENCE, OCCASION, AND PURPOSE. | | |
|---|---|---|
| **UNSATISFACTORY = The speaker fails to use an introduction or conclusion and fails to provide a reasonalby clear and logical progression within and between ideas.** | **SATISFACTORY = The speaker uses an appropriate introduction and conclusion and provides a resonalby clear and logical progression within and between ideas.** | **EXCELLENT = The speaker uses an exceptional introduction and conclusion and provides an exceptionally clear and logical progression within and between ideas.** |
| **Organizational Pattern**<br>Need work on strong introduction and transitions<br>Tie conclusion specifically to main points<br>Lacked organization<br>Development not totally logical<br>You need to put more effort into planning your speeches because I can't see much improvement<br>Organizational logic was not clear see me and we will work through this<br>Transitions a little bumpy disjointed<br>Transitions would have helped to establish flow between main points<br>You need to study the correct form to use in outlining | **Organizational Pattern**<br>Interesting introduction<br>Don't say "Thank you" at the end of the presentation.<br>Conclusion a little abrupt<br>Preview needs to be more direct.<br>Paraphrase and restate the complex concepts in the presentation.<br>Your ideas make sense and indicate careful preparation.<br>Nice energetic introduction<br>Good use of internal summaries<br>A stronger preview would have reinforced the concepts of past and present<br>The satisfaction step could use more development<br>Clear call to action<br>Make the call for action more | **Organizational Pattern**<br>Effective use of motivated sequence<br>Effective introduction and organization and conclusion<br>Super job at providing information!<br>Smooth transitions between ideas<br>I understand. Your points are well proven.<br>Strong arguments<br>Your points came across well.<br>Effective call to action<br>Your organizational skills are a great strength for you<br>Creative introduction<br>Exellent attention getting device and organization<br>Excellent introduction<br>Astute selection of points of |

(Appendix C continues)



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(Appendix C continued)

| COMPETENCY FIVE: USES LANGUAGE APPROPRIATE TO THE AUDIENCE AND OCCASION | | |
|---|---|---|
| **UNSATISFACTORY = The speaker uses unclear or inappropriate language.** | **SATISFACTORY = The speaker uses language that is reasonably clear, vivid, and appropriate.** | **EXCELLENT = The speaker uses language that is exceptionally clear, vivid, and appropriate.** |
| **Language**<br>The language you chose clouded your message.<br>Your language was unclear in meaning and was not vivid.<br><br>**Audience**<br>"You guys" is sexist and exclusionary. | **Language**<br>You explained the material well.<br>You are very knowledgeable of relevant terms and demonstrate a wide vocabulary.<br>Good word choices.<br>You used some words too many times.<br>Good use of comparison.<br>Your language was reasonably vivid in conveying meaning.<br>Your language lacked any poetical expression.<br>Your language was reasonably clear in conveying meaning.<br>The language you chose lacked creativity.<br><br>**Audience**<br>Your ideas could be easily understood. | **Language**<br>Relevant use of analogy.<br>The language you chose showed a measure of creativity.<br>Your language (word choice) made a stab at poetic expression.<br>Effective use of repetition.<br>You drew excellent pictures with words--great metaphors.<br>The language you chose added an excellent measure of creativity.<br>The words you chose to describe things painted vivid pictures for me.<br>Your language was exceptionally clear and sensitive to nuances of meaning.<br>The language you chose was exceptionally poetical.<br><br>**Audience**<br>Your terminology was well-thought out and very |

(Appendix C continues)

(Appendix C continued)

| COMPETENCY SIX: USES VOCAL VARIETY IN RATE, PITCH, AND INTENSITY (VOLUME) TO HEIGHTEN AND MAINTAIN INTEREST APPROPRIATE TO THE AUDIENCE AND OCCASION. | | |
|---|---|---|
| **UNSATISFACTORY** = The speaker fails to use vocal variety and fails to speak in a conversational mode. | **SATISFACTORY** = The speaker makes acceptable use of vocal variety in a conversational mode. | **EXCELLENT** = The speaker makes exceptional use of vocal variety in a conversational mode. |
| **Vocal Variety**<br>You need to work on your vocalics as a whole.<br>Your voice does not sound conversational.<br>The lack of a good pace, volume, and pitch detracted from your speech.<br><br>**Rate**<br>Try to slow down your rate of delivery.<br>Slower rate of utterance needed.<br>Your fast speaking makes your listeners tense and nervous.<br>Long pauses at the wrong places are ineffective. | **Vocal Variety**<br>Your use of good pace, volume and pitch helped your speech.<br>You have a good conversational delivery and are easy to listen to.<br>Good employment of vocal variety.<br>Try to use variety in your voice.<br>You have a pleasant voice.<br><br>**Rate**<br>Good pauses between major ideas.<br>Good use of silent pauses.<br>Pause between major sections of the speech.<br>Good speaking rate. | **Vocal Variety**<br>The excellent conversational quality of your voice was very pleasing.<br>Your extraordinary use of pace, volume, and pitch greatly impacted your speech.<br>Your voice is very dynamic.<br>Your use of vocal variety had a superb impact on your speech.<br><br>**Rate**<br>Your vocalics were appropriately well-paced.<br>Your rate of speaking greatly enhanced the delivery of your speech.<br>The pace of your vocalics strongly bolstered your speech.<br>The noticeable pause after your main points was effective.<br>Your vocalics are exceptionally and appropriately |

(Appendix C continues)



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(Appendix C continued)

| COMPETENCY SEVEN: USES PRONUNCIATION, GRAMMAR, AND ARTICULATION APPROPRIATE TO THE AUDIENCE AND OCCASION. | | |
|---|---|---|
| **UNSATISFACTORY = The speaker fails to use acceptable articulation, pronunciation, and grammar.** | **SATISFACTORY = The speaker has acceptable articulation, with few pronunciation or grammatical errors.** | **EXCELLENT = The speaker has exceptionaly articulation, pronunciation, and grammar.** |
| **Pronunciation**<br>Work on pronouncing each word so that words don't run together.<br>Your regional pronunciations of certain words distracted from your message.<br>Your pronunciation of many words sounded incorrect.<br><br>**Grammar**<br>Pronoun/antecedent disagreement is a flagrant error.<br>Your improper grammar makes your speech confusing.<br>Subject/verb disagreement is a blatant error.<br>Your grammatical errors made understanding your speech | **Pronunciation**<br>Your enunciation of many words needs to be sharpened.<br>Pronounce your words clearly.<br>Good enunciation.<br>Watch ending sounds of words.<br>Be secure in pronunciation of names before using them.<br>The pronunciation of most of your words was clear.<br>Your pronunciation of one or two words sounded incorrect.<br><br>**Grammar**<br>Do not end sentences with prepositions.<br>Your grammatical errors made understanding your speech slightly difficult.<br>Awkward sentence structure.<br>Your grammar needed a little bit of cleaning up.<br>You use good grammar when | **Pronunciation**<br>Your pronunciation for all of the words you used sounded correct.<br>Your enunciation of words was very clear.<br>Your pronunciation of words enhanced your message.<br><br>**Grammar**<br>Your use of grammar was extraordinary.<br>I noticed no grammar errors in your speech.<br>Grammatically speaking, your speech was extremely clear. |

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(Appendix C continues)

(Appendix C continued)

| COMPETENCY EIGHT: USES PHYSICAL BEHAVIORS THAT SUPPORT THE VERBAL MESSAGE. | | |
|---|---|---|
| **UNSATISFACTORY = The speaker fails to use acceptable posture, gestures, facial expressions, eye contact and dress.** | **SATISFACTORY = The speaker demonstrates acceptable posture, gestures, facial expressions, eye contact and use of dress.** | **EXCELLENT = The speaker demonstrates exceptional posture, gestures, bodily movement, facial expressions, eye contact and use of dress.** |
| **Physical Behavior**<br>Don't distribute handouts until one is ready to use them<br>Your physical behaviors do not support your verbal message<br>The non-verbal communication you exhibited contradicted your verbal message.<br>Your use of supporting physical behaviors needs a lot of work<br><br>**Posture**<br>Watch posture-leaning on lecturn<br>Avoid one-legged posture<br>Your poor posture detracted a great deal from your speech | **Physical Behaviors**<br>Good interaction with audience<br>Place hands on lecturn<br>Leave pencil/pen at your desk<br>Your non-verbal communication strengthened your verbal message to some extent.<br>Try to keep papers quiet<br>Keep papers flat<br>Work for a more dynamic delivery<br>Your use of supporting physical behaviors needs a little work.<br>Your physical behaviors supported your verbal message adequately<br><br>**Posture**<br>Don't start speaking before assuming a speaker's position.<br>Your posture was fine; it did not distract from your credibility as a speaker | **Physical Behaviors**<br>Your exceptional physical behaviors enhanced your credibility.<br>Excellent use of nonverbal cues<br>Your noteworthy non-verbal behaviors consistently supported your message very well.<br><br>**Posture**<br>Your exceptional posture consistently supported your verbal message<br>Your noteworthy posture enhanced your credibility as a |



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Appendix D

Copy of Sample Printout from the

Computerized Competent Speaker Evaluation System

**THE COMPETENT SPEAKER SPEECH PERFORMANCE EVALUATION FORM**

**SPEAKER'S NAME:** Chris Student
**EVALUATOR'S NAME:** Steve Writer

**ASSIGNMENT:** Sample Speech
**DATE:** Tue, Jul 5, 1994

| EIGHT PUBLIC SPEAKING COMPETENCIES | SPEAKING PERFORMANCE RATING | | |
|---|---|---|---|
| | UNSAT | SAT | EXCELL |
| **COMPETENCY ONE:** Chooses and narrows a topic appropriate to the audience and occasion | 0 | 0 | 9 |

**COMMENTS:**
Excellent topic selection E
Timely topic selection E

Chris, your topic about the use of the computer in the classroom is fantastic for this project. Where did you come up with the idea? E

| | | | |
|---|---|---|---|
| **COMPETENCY TWO:** Communicates the thesis/specific purpose in a manner appropriate for the audience and occasion | 0 | 6 | 0 |

**COMMENTS:**
Your audience liked your specific purpose S
Interesting tie-in of thesis/specific purpose with the occasion S

| | | | |
|---|---|---|---|
| **COMPETENCY THREE:** Provides appropriate supporting material based on the audience and occasion | 0 | 0 | 7 |

**COMMENTS:**
Outstanding visual aids E
Good use of credible sources S
The supporting material you chose fit the occasion well. S

The visual aids of your computer screens really enhanced your speech, but they needed to be larger for everyone to see. S

| | | | |
|---|---|---|---|
| **COMPETENCY FOUR:** Uses an organizational pattern appropriate to topic, audience, occasion, and purpose | 0 | 0 | 8 |

**COMMENTS:**
I understand. Your points are well proven. E
Forceful conclusion E
The body of your speech clearly communicates your message to audience E
The organizational development was extremely appropriate for the occasion E

(Appendix D continues)

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(Appendix D continued)

**COMPETENCY FIVE:** Uses language that is appropriate to the audience and occasion — 0 0 0

**COMMENTS:**

Your terminology was well-thought out and very appropriate for this audience E
Your use of jargon was exceptionally tasteful for this occasion. E
Your language was exceptionally clear and sensitive to nuances of meaning E

You had a very good balance between terms that were discipline specific to your speech and terms that your audience could understand, Chris. E

**COMPETENCY SIX:** Uses vocal variety in rate, pitch, and intensity to heighten and maintain interest — 2 0 0

**COMMENTS:**

Your voice does not sound conversational. U
Try to slow down your rate of delivery. U
Your pitch sounds too high--work on a lower pitch. U
Speak louder and try to vary your intensity to emphasize points. U

Chris, can you come to see me some time soon so that we can talk about some exercises that you can do to work on the pitch of your voice? I would like to suggest some breathing exercises. You are not alone in this. I had a student a few semesters ago who really worked on pitch and made great improvements! U

**COMPETENCY SEVEN:** Uses pronunciation, grammar, and articulation appropriate to the designated audience — 0 5 0

**COMMENTS:**

Your grammatical errors made understanding your speech slightly difficult. S
Your pronunciation for all of the words you used sounded correct. E
Pronoun/antecedent disagreement is a flagrant error. U
Your misuse of grammar slightly detracted from your speech and the occasion. S

**COMPETENCY EIGHT:** Uses physical behaviors that support the verbal message — 3 0 0

**COMMENTS:**

Your physical behaviors do not support your verbal message. U
Don't start speaking before assuming a speaker's position. S
Your delivery is stiff and jerky. U
Try moving away from lectern S
Your unacceptable facial expressions are incongruent with your verbal intent U
I really appreciate your effort to dress well for your speech. E

**GENERAL COMMENTS:** **TOTAL SCORE OF COMPETENCIES** 49

Chris, I appreciate the increased effort that you are putting into each speech.

Appendix E

Sample Costs of Hardware Components of the Computerized Competent Speaker Evaluation System

A very basic package for any communication department considering the use of the Computerized Competent Speaker Evaluation System is listed below. Since computer hardware goes through so many developments so quickly, the hardware that was purchased for this experiment in 1991 has already been outdated. Therefore, a computer analyst at the University of Colorado at Colorado was consulted (Witter, 1994a). He indicated that the hardware used in this experiment was the middle-of-the-line Macintosh$^{tm}$ hardware at the time that it was purched. He suggested contemporary replacement hardware. An electrical engineer at the Univerisity of Colorado at Colorado Springs was consulted about the cost of installation (Witter, 1994b). Approximate 1994 are provided:

One Macintosh Quadra 650$^{tm}$ 8MB Hard Disk 230 CPU (model M2107LL/A) =

app. $1,700.00 x 2 CPUs = $3,400.00

(Appendix E continues)

(Appendix E continued)

One Apple™ Extended Keyboard
(model M0312) =

app. $140.00 x 2 keyboards = $280.00

One Macintosh™ Color Display
(model M1198LL/B) =

app. $360.00 x 2 monitors = $720.00

One Macintosh™ LaserWriter Pro 630 (8MB)
(model M5858LL/B) =

app. $1,645.00 x 1 printer = $1,645.00

Installation of the two Macintosh™
computers with monitors and keyboards
and the hardware for the network
connections =

app. $60.00 x 1 inst. chg.= $60.00

Training of one person at $8.00/hour
for 2 work days (16 hours) =

app. $128.00 x 2 raters = $256.00

Total $6,361.00

An optional and less expensive hardware package would consist of the following. The costs for the CPU,

(Appendix E continues)

(Appendix E continued)

keyboard, monitor, installation, and training would be the same. A less expensive, but adequate printer would complete the package.

| | | |
|---|---|---|
| CPU, keyboard, monitor, installation, and training = | app. | $4,716.00 |
| DeskWriter™ 520 (Part #CZ1718) = | app. | $365.00 |
| Total | | $5,081.00 |

Note: Costs have not been established for the purchase of the Computerized Competent Speaker Evaluation System.

## References

Witter, S. D. (1994a, August). [Interview with Michael Belding, computer analyst at the University of Colorado at Colorado Springs].

Witter, S. D. (1994b, August). [Interview with Scott Carter, electrical engineer at the University of Colorado at Colorado Springs].

## Author's Note

The primary researcher of this project would like to thank other individuals who contributed to the development of the Computerized Competent Speaker Evaluation System. In addition to Dr. Sherwyn P. Morreale, Dr. Donald D. Morley and Dr. Kim-B. Walker served on the thesis committee for this project. Dr. Morley provided methodological direction, and Dr. Walker offered insightful criticism of this project.

Graduate students were vitally involved in this project. Beth Zautke conducted separate interviews of Dr. Ralph Behnke and Dr. Chris Sawyer, traveling from Colorado to Texas to conduct those interviews. For several hours, Kathy Ellis, Josie Mares-Dean, and Lori Pinello-Tegtmeier sorted the comments in both of the *Q* sorts. Colleen McCormick and Marcel Hunter offered helpful suggestions as they evaluated students' speeches in the test group with the Computerized Competent Speaker Evaluation System. Laura Austin and Hazel Lowe rated students' speeches in the control group.

End Note

[1]The terminology that refers to the microcomputer as a "tool" of mankind often alludes to the prevalent assumption in academia today that mankind has evolved from the primates. The primary researcher in this study categorically disagrees with this assumption. Reason, itself, points to a blatant discrepancy evident in the comparison of the development of the microcomputer systems of the later part of the twentieth century to the evolution of the world as it is known today. This so-called "tool" of humankind, a technological wonder of this century, has been developed by intelligent and purposeful engineers. Furthermore, the Computerized Competent Speaker Evaluation System was developed by a purposeful researcher. This experimenter disagrees with the notion that the computer is a "tool" that has been developed by humankind as he/she has evolved from the primates into humankind.

Table 1

*t* tests of Differences in Mean Scores on Speeches for Students Receiving Computerized Feedback as Compared to Students Receiving Handwritten Feedback

| Speech | N | Mean | Std. Dev. | *t* value | d.f. | 2-tail Prob. |
|---|---|---|---|---|---|---|
| Final | | | | 3.0 | 53.6* | .004 |
| Comp Fdbk | 29 | 99.3 | 10.4 | | | |
| Hdwtn Fdbk | 28 | 91.7 | 8.5 | | | |

* $p < .01$

Table 2

*t* tests of Differences in Mean Scores of the Raters on the *Final Speech* for Students Receiving Computerized Feedback as Compared to Students Receiving Handwritten Feedback

| Raters | N | Mean | Std. Dev. | *t* value | d.f. | 2-tail Prob. |
|---|---|---|---|---|---|---|
| Raters 1 & 2 | | | | 1.8 | 17.5 | .095 |
| Rater 1 | 13 | 102.6 | 3.4 | | | |
| Rater 2 | 16 | 96.6 | 13.2 | | | |
| Raters 1 & 3 | | | | 3.8 | 20.5** | .001 |
| Rater 1 | 13 | 102.6 | 3.4 | | | |
| Rater 3 | 14 | 95.4 | 6.3 | | | |
| Raters 1 & 4 | | | | 5.6 | 16.9*** | .000 |
| Rater 1 | 13 | 102.6 | 3.4 | | | |
| Rater 4 | 14 | 88.1 | 9.1 | | | |

(Table 2 continues)

Table 2, continued

| Raters | N | Mean | Std. Dev. | t value | d.f. | 2-tail Prob. |
|---|---|---|---|---|---|---|
| Raters 2 & 3 | | | | .33 | 22.05 | .747 |
| Rater 2 | 16 | 96.6 | 13.2 | | | |
| Rater 3 | 14 | 95.4 | 6.3 | | | |
| Raters 2 & 4 | | | | 2.1 | 26.6* | .047 |
| Rater 2 | 16 | 96.6 | 13.2 | | | |
| Rater 4 | 14 | 88.1 | 9.1 | | | |
| Raters 3 & 4 | | | | 2.5 | 23.1* | .021 |
| Rater 3 | 14 | 95.4 | 6.3 | | | |
| Rater 4 | 14 | 88.1 | 9.1 | | | |
| Raters 1,2 & 3,4 | | | | 3.0 | 53.6** | .004 |
| Raters 1,2 | 29 | 99.3 | 10.4 | | | |
| Raters 3,4 | 28 | 91.7 | 8.5 | | | |

* $p < .05$
** $p < .01$
*** $p < .001$

Table 3

t Tests of Differences in Items on Posttest Questionnaire for Students Receiving Computerized Feedback and Students Receiving Handwritten Feedback

| Questionnaire Item | N | Mean | Std. Dev. | t value | d.f. | 2-tail Prob. |
|---|---|---|---|---|---|---|
| Elapsed Time (1) | | | | 4.3 | 46.55*** | .000 |
| Comp Fdbk | 27 | 5.8 | 1.3 | | | |
| Hdwtn Fdbk | 27 | 4.0 | 1.8 | | | |
| Evaluation by Computer Bothersome (5) | | | | 2.6 | 51.0* | .012 |
| Comp Fdbk | 27 | 2.5 | 1.7 | | | |
| Hdwtn Fdbk | 27 | 3.9 | 1.4 | | | |
| Database of Comments (8) | | | | -2.1 | 47.6* | .044 |
| Comp Fdbk | 27 | 3.7 | 1.7 | | | |
| Hdwtn Fdbk | 27 | 2.9 | 1.2 | | | |

(Table 3 continues)

Table 3, continued

| Questionnaire Item | N | Mean | Std. Dev. | t value | d.f. | 2-tail Prob. |
|---|---|---|---|---|---|---|
| Time Frame in which Feedback Given was Good (13) | | | | -2.7 | 45.2* | .011 |
| Comp Fdbk | 27 | 5.7 | 1.0 | | | |
| Hdwtn Fdbk | 27 | 4.7 | 1.6 | | | |
| Stan./Non-Stan. Comments Allow Obj./Subj. Grading (14) | | | | -2.7 | 51.9** | .009 |
| Comp Fdbk | 27 | 4.7 | 1.3 | | | |
| Hdwtn Fdbk | 27 | 3.7 | 1.3 | | | |

* p<.05
** p<.01
*** p<.001

Table 4

Observed Mean and Adjusted Mean of Underlying Constructs in Questionnaire with Grouping of Students by Confounding Variable

| Source of Variation | Observed Mean | Adjusted Mean |
|---|---|---|
| Personalized Comments (Database) (Items 3,8) | | |
| Comp Fdbk | 3.60 | 3.60 |
| Hdwtn Fdbk | 2.96 | 2.96 |
| Liking for Computerized /Handwritten Feedback (Items 4,10) | | |
| Comp Fdbk | 4.88 | 4.89 |
| Hdwtn Fdbk | 5.31 | 5.31 |
| Type of Feedback Limited Rater (Items 6,10) | | |
| Comp Fdbk | 3.50 | 3.51 |
| Hdwtn Fdbk | 3.69 | 3.68 |
| Rater/Feedback/Time Frame=Improvement (Items 1,9,12,13) | | |
| Comp Fdbk | 4.61 | 4.63 |
| Hdwtn Fdbk | 3.57 | 3.55 |

Table 5

Multivariate Analysis of Covariance of Underlying Constructs in Questionnaire by Perceived Grade in COMM 210

| Source of Variation | d.f. | MS | F | Level of Significance |
|---|---|---|---|---|
| Personalized Comments (Databage) (Items 3,8) | 1 | 5.34 | 3.10 | .084 |
| Liking for Computerized /Handwritten Feedback (Items 4,10) | 1 | 2.31 | 1.30 | .260 |
| Type of Feedback Limited Rater (Items 6,10) | 1 | 0.38 | 0.19 | .668 |
| Rater/Feedback/Time Frame = Improvement (Items 1,9,12,13) | 1 | 14.99 | 5.41* | .024 |

* $p < .05$
** $p < .01$
*** $p < .001$